UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,984	02/09/2001	Kurt E. Spears	10011155-1	2245

7590 02/22/2006

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
PHAM, THIERRY L	
ART UNIT	**PAPER NUMBER**
2624	

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/780,984	SPEARS ET AL.	
	Examiner	Art Unit	
	Thierry L. Pham	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

- This action is responsive to the following communication: An Appeal Brief filed on11/14/05.
- Claims 1-36 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Suggs (US 6009214).

Regarding claim 1, Suggs discloses a multiple resolution sensing apparatus (multi-resolution image sensing apparatus 50, fig. 3e, col. 1, lines 5-7) comprising:

- a plurality of first photosensor elements (plurality of photosensors 59 to form photosensor segment 58, fig. 3a) coupled together to form a first linear array (photosensor segment 58, fig. 3a) and having a first length (length as shown from 1p to Np, fig. 3a) and a first resolution (photosensor segment 58 has different resolution from photosensor segment 60, fig. 3b, col. 3, lines 38-45 and col. 5, lines 38-42);
- a plurality of second photosensor elements (plurality of photosensors 61 to form photosensor segment 60, fig. 3b) coupled together to form a second linear array (photosensor segment 61, fig. 3b) and having a second length and a second resolution (photosensor segment 60 has different resolution from photosensor segment 58, col. 3, lines 38-45 and col. 5, lines 42-47);
- a coupler (coupler 54, fig. 3e, col. 44-45) having an output, said coupler coupled to said first linear array and to said second linear array (coupling photosensor segment 58 photosensor segment 60, fig. 3e, col. 44-45);

• a controller (controller is inherently included within a multi-resolution sensing apparatus for sending control signals to selected photosensor segment either automatically or manually, col. 4, lines 22-30 and col. 5, lines 25-30) coupled to said coupler and providing a control signal (control signal 4, lines 23-24) to said coupler such that said output is coupled to said first linear array when said first resolution (send control signal to photosensor segment 58 if first resolution is employed, fig. 3e, col. 4, lines 18-38 and col. 5, lines 48-51) is employed and such that said output is coupled to said second linear array, instead of said first linear array, when said second resolution is employed (send control signal to photosensor segment 60 instead of photosensor segment 58 if second resolution is employed, col. 4, lines 18-38 and col. 5, lines 52-57).

Regarding claim 2, Suggs further discloses the apparatus of claim 1, wherein said first linear array and said second linear array (photosensor segment 58 & 60 are formed on a single array 50, fig. 3e) array are placed on a single substrate.

Regarding claim 3, Suggs further discloses the apparatus of claim 1, wherein said first linear array, said second linear array and said coupler are placed on a single substrate (photosensor segment 58 & 60 and coupler 54 are formed on a single array 50, fig. 3e).

Regarding claim 4, Suggs further discloses the apparatus of claim 2, wherein said coupler further includes at least one amplifier (amplification, col. 3, lines 24-26), and wherein said first linear array, said second linear array and said coupler with said at least one amplifier are placed on a single substrate (array 50, fig. 3e).

Regarding claim 5, Suggs further discloses the apparatus of claim 2, wherein said first length and said second length (segments 58 and segments 60 lengths are same size, fig. 3a-3e) are substantially the same and at least equal to one dimension of an image to be sensed.

Regarding claim 6, Suggs further discloses the apparatus of claim 1, wherein said coupler further comprises a switch (switch between segments 58 and 60, col. 4, lines 18-30) controlled by said controller such that said switch couples said output to said first linear array when said first resolution is employed and such that said switch couples said output to said second linear array when said second resolution is employed (col. 4, lines 18-30).

Regarding claim 7, Suggs further discloses the apparatus of claim 6, wherein said coupler further comprises:

- a first amplifier (amplification, col. 3, lines 24-26) coupled between said switch and said first linear array such that charges detected by said plurality of first photosensor elements are amplified into a first electrical signal; and
- a second amplifier (amplification, col. 3, lines 24-26) coupled between said switch and said second linear array such that charges detected by said plurality of second photosensor elements are amplified into a second electrical signal.

Regarding claim 8, Suggs further discloses the apparatus of claim 1, wherein said first linear array and said second linear array detect a first color (i.e. red, col. 1, lines 20-22) of light.

Regarding claim 9, Suggs further discloses the apparatus of claim 1, further comprising: a plurality of third photosensor elements (plurality of photosensors 59 to form segment 58, fig. 3c) coupled together to form a third linear array and having a third length and said first resolution (segment 58 of array 50, see right hand side, fig. 3e); a plurality of fourth photosensor elements (plurality of photosensors 61 to form photosensor segment 60, fig. 3b) coupled together to form a fourth linear array and having a fourth length and said second resolution (segment 60 of array 50, see right hand side, fig. 3e); a second coupler having an second output, said second coupler coupled to said third linear array and to said fourth linear array; a plurality of fifth photosensor elements coupled together to form a fifth linear array and having a fifth length and said

first resolution; a plurality of sixth photosensor elements coupled together to form a sixth linear array and having a sixth length and said second resolution; a third coupler having a third output, said coupler coupled to said first linear array and to said second linear array, wherein said controller is coupled to said second coupler and said third coupler, and wherein said controller provides said control signal to said second coupler so that said second output is coupled to said third linear array when said first resolution is employed and so that said second output is coupled to said fourth linear array when said second resolution is employed, and wherein said controller provides said control signal to said third coupler so that said third output is coupled to said fifth linear array when said first resolution is employed and so that said third output is coupled to said sixth linear array when said second resolution is employed. Array 50 as shown in fig. 3e contains plurality of segments 58, segments 60.

Regarding claim 10, Suggs further discloses the apparatus of claim 9, wherein said first linear array and said second linear array detect a first color of light, wherein said third linear array and said fourth linear array detect a second color of light, and wherein said fifth linear array and said sixth linear array detect a third color of light (RGB, 1, lines 20-25, it is well known that any arrays can be filtered to receive specific lights, for example, segments 58 can be filtered to receive red and segment 60 can be filtered to receive blue, and etc).

Regarding claim 11, Suggs further discloses the apparatus of claim 9, wherein said first linear array, said second linear array, said third linear array, said fourth linear array, said fifth linear array and said sixth linear array are placed on a single substrate (plurality of different photosensors segments are placed on a single array substrate 50, fig. 3e).

Regarding claim 12, Suggs further discloses the apparatus as in claim 11, wherein said first length, said second length, said third length, said fourth length, said fifth length

and said sixth length are substantially the same (all segments are same size, fig. 3a-3e) and at least equal to one dimension of an image to be sensed.

Regarding claim 13, Suggs further discloses the apparatus as in claim 1, further comprising a plurality of third photosensor elements (plurality of photosenosrs 63, to form segment 62, fig. 3c) coupled together to form a third linear array and having a third length and a third resolution (photosensor segment 62 has different resolution from photosensor segment 58 and 60, col. 3, lines 38-45 and col. 6, lines 5-8), said third linear array coupled to said coupler and wherein said controller providing a control signal to said coupler such that said output is coupled to said third linear array when said third resolution is employed.

Regarding claim 14, Suggs further discloses the apparatus of claim 12, wherein said first linear array, said second linear array, said third linear array and said coupler are placed on a single substrate (segments 58, 60, and 62 are formed on a single array substrate 50, fig. 3e).

Regarding claim 15, Suggs further discloses the apparatus of claim 12, wherein said first length, said second length and said third length are substantially the same (all segments are same size, fig. 3a-3e) and at least equal to one dimension of an image to be sensed.

Regarding claim 16, Suggs further the apparatus of claim 15, wherein said coupler further comprises a third amplifier coupled to said third linear array such that changes detected by said plurality of third photosensor elements are amplified (amplification, col. 3, lines 24-26) into a third electrical signal.

Regarding claim 17, Suggs further discloses the apparatus of claim 16, wherein said first linear array, said second linear array and said third linear array detect a first color of light (i.e. red, col. 1, lines 20-22).

Regarding claim 18, Suggs further discloses the apparatus of claim 13, wherein said first resolution corresponds to said first linear array having substantially 300 of said first photosensitive elements (segment 58 have plurality of photosenosrs ranging 1-to-N, fig. 3e), wherein said second resolution corresponds to said second linear array having substantially 600 of said second photosensitive elements, and wherein said third resolution corresponds to said third linear array having substantially 2400 of said third photosensitive elements.

Regarding claim 19, Suggs further discloses the apparatus of claim 18, wherein said third linear array is comprised of two rows, each row having substantially 1200 of said third photosensitive elements (segment 62 have plurality of photosenosrs ranging 1-to-N, fig. 3e).

Regarding clam 20, Suggs further discloses a method of multiple resolution sensing (multi-resolution image sensing apparatus 50, fig. 3e, col. 1, lines 5-7) comprising the steps of:

- actuating a first linear (send control signal to photosensor segment 58 if first resolution is employed, fig. 3e, col. 4, lines 18-38 and col. 5, lines 48-51) residing in a coupler such that a plurality of first photosensor elements in a first linear array detect an image when a first resolution is specified; and
- actuating said first switch such that a plurality of second photosensor elements (array 50 as shown in fig. 3e contains plurality of segments 58, segments 60) in a second linear array detect said image, instead of using the plurality of first photosensor elements in the first linear array, when a second resolution is specified (send control signal to photosensor segment 60 instead of photosensor segment 58 if second resolution is employed, col. 4, lines 18-38 and col. 5, lines 52-57.

Regarding claim 21, Suggs further discloses the method of claim 20 further comprising the step of disposing said first linear array and said second linear array on a single substrate (photosensor segment 58 & 60 are formed on a single array 50, fig. 3e).

Regarding claim 22, Suggs further discloses the method of claim 21, wherein said first linear array and said second linear array are disposed on said single substrate so as to have substantially an equal length, said equal length (segments 58 and segments 60 lengths are same size, fig. 3a-3e) at least as long as one dimension said image.

Regarding claim 23, Suggs further discloses wherein said first linear array and said second linear array are disposed on said single substrate to as to have substantially an equal length (segments 58 and segments 60 lengths are same size, fig. 3a-3e), said equal length at least as long as one dimension of said image.

Regarding claim 24, Suggs further discloses the method of claim 20, further comprising the steps of:

- actuating a second switch such that a plurality of third photosensor elements (plurality of photosensors 59 to form segment 58, fig. 3c) in a third linear array detect said image when said first resolution is specified and actuating said second switch such that a plurality of fourth photosensor elements in a fourth linear array detect said image when said second resolution is specified; and
- actuating a third switch (ref. 54, fig. 3e) such that a plurality of fifth photosensor elements in a fifth photosensor elements in a fifth linear array detect said image when said first resolution (ref. 58 on the right side of array 50, fig. 3e) is specified and actuating said third switch such that a plurality of sixth photosensor elements in a sixth linear array detect said image when said second resolution (second resolution, col. 4, lines 18-30) is specified.

Regarding claim 25, Suggs further discloses the method of claim 24, further comprising the step of disposing said fist linear array, said second linear array, said third

linear array, said fourth linear array, said fifth linear array and said sixth linear array on a single substrate (photosensor segment 58 & 60 are formed on a single array 50, fig. 3e).

Regarding claim 26, Suggs further discloses the method of claim 25, wherein said first linear array, said second linear array, said third linear array, said fourth linear array, said fifth linear array and said fifth linear array are disposed on said single substrate (photosensor segment 58 & 60 are formed on a single array 50, fig. 3e) so as to have substantially an equal length, said equal length at least as long as one dimension of said image.

Regarding claim 27, Suggs further discloses the method of claim 24, further comprising the steps of:

- detecting a first color (red, col. 1, lines 20-22) with said first linear array and said second linear array;
- detecting a second color (green, col. 1, ,lines 20-22) with said third linear array and said fourth linear array; and
- detecting a third color (blue, col. 1, lines 20-22) said fifth linear array and said sixth linear array. It is well known that any arrays can be filtered to receive specific lights, for example, segments 58 can be filtered to receive red and segment 60 can be filtered to receive blue, and etc.

Regarding claim 28, Suggs further discloses the method of claim 20, further comprising the step of actuating said first switch such that a plurality of third photosensor elements in a third linear array detect said image when a third resolution (third resolution, col. 6, lines 4-8) is specified.

Regarding claim 29, Suggs further discloses the method of claim 28, further comprising the step of disposing said first linear array, said second linear array and said third linear array on a single substrate (photosensor segment 58 & 60 are formed on a single array 50, fig. 3e).

Regarding claim 30, Suggs further discloses the method of claim 28, further comprising the step of disposing said first linear array, said second linear array, said third linear array and said coupler on a single substrate (photosensor segment 58 & 60 are formed on a single array 50, fig. 3e).

Regarding claim 31, Suggs further discloses the method of claim 29, wherein said first linear array, said second linear array and said third linear array are disposed on said single substrate (photosensor segment 58 & 60 are formed on a single array 50, fig. 3e) so as to have substantially an equal length, said equal length (segments 58 and segments 60 lengths are same size, fig. 3a-3e) at least as long as one dimension of said image.

Regarding claim 32, Suggs further discloses the method of claim 29, wherein said first linear array, said second linear array and said third linear array detect the same color It is well known that any arrays can be filtered to receive specific lights, for example, segments 58 can be filtered to receive red and segment 60 can be filtered to receive blue, and etc.

Regarding claim 33, Suggs further discloses a system for multiple resolution sensing comprising: means for actuating a first switch such that a plurality of first photosensor elements in a first linear array detect an image when a first resolution is specified (send control signal to photosensor segment 58 if first resolution is employed, fig. 3e, col. 4, lines 18-38 and col. 5, lines 48-51); and means for actuating said first switch such that a plurality of second photosensor elements in a second linear array detect said image when a second resolution is specified (send control signal to photosensor segment 60 instead of photosensor segment 58 if second resolution is employed, col. 4, lines 18-38 and col. 5, lines 52-57).

Regarding claim 34, Suggs further discloses the system of claim 33, further comprising: means for actuating a second switch such that a plurality of third photosensor elements in a third linear array detect said image when said first resolution (send control signal to photosensor segment 58 if first resolution is employed, fig. 3e, col. 4, lines 18-38 and col. 5, lines 48-51, please notes: array 50 contains more than one segments 58) is specified and actuating said second switch such that a plurality of fourth photosensor elements in a fourth linear array detect said image when said second resolution (send control signal to photosensor segment 60 instead of photosensor segment 58 if second resolution is employed, col. 4, lines 18-38 and col. 5, lines 52-57) is specified; and means for actuating a third switch such that a plurality of fifth photosensor elements in a fifth linear array detect said image when said first resolution is specified and actuating said third switch such that a plurality of sixth photosensor elements in a sixth linear array detect said image when said second resolution (send control signal to photosensor segment 60 instead of photosensor segment 58 if second resolution is employed, col. 4, lines 18-38 and col. 5, lines 52-57, and please notes: plurality of different photosensors segments are placed on a single array substrate 50, fig. 3e) is specified.

Regarding claim 35, Suggs further the system of claim 33, further comprising means for actuating said first switch such that a plurality of third photosensor elements in a third linear array detect an image when a third resolution (third resolution, col. 6, lines 4-8) is specified.

Regarding claim 36, Suggs further discloses the system of claim 35, further comprising: means for actuating a second switch such that a plurality of fourth photosensor elements in a fourth linear array detect said image when said first resolution (send control signal to photosensor segment 58 if first resolution is employed, fig. 3e, col. 4, lines 18-38 and col. 5, lines 48-51, please notes: array 50 contains more than one segments 58) is specified, and actuating said second switch such that a plurality of fifth photosensor elements in a fifth linear array detect said image when said second resolution

is specified, and actuating said second switch such that a plurality of sixth photosensor elements in a sixth linear array detect said image when said third resolution (third resolution, col. 6, lines 4-8) is specified; and means for actuating a third switch such that a plurality of seventh photosensor elements in a seventh linear array detect said image when said first resolution (send control signal to photosensor segment 58 if first resolution is employed, fig. 3e, col. 4, lines 18-38 and col. 5, lines 48-51, please notes: array 50 contains more than one segments 58) is specified, and actuating said third switch such that a plurality of eight photosensor elements in an eight linear array detect said image when said second resolution is specified, and actuating said third switch such that a plurality of ninth photosensor elements in a ninth linear array detect said image when said third resolution (third resolution, col. 6, lines 4-8) is specified.

Response to Arguments

In view of the appeal brief filed on 11/14/05, PROSECUTION IS HEREBY REOPENED. A new ground of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

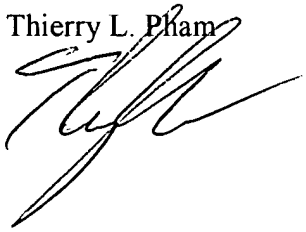
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham



DAVID MOORE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600